

See also:  
 SAT-AMD-20050323-00071  
 SAT-STA-20041217-00224  
 SAT-STA-20050406-00080



File # SAT-MOD-20050204-00025  
 with attached conditions

Call Sign KS35 Grant Date April 27, 2005  
 (or other identifier)

Approved by OMB  
 3060-0678

Term Dates  
 From April 27, 2005 To: May 30, 2006

Approved: [Signature] Chief Satellite  
Robert G. Nelson Engineering Branch

Date & Time Filed: Feb 4 2005 4:30:37:666PM  
 File Number: SAT-MOD-20050204-00025

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD - MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
 Intelsat LLC - MARISAT-F2 - Modification to Provide UHF Service

1-8. Legal Name of Applicant

<b>Name:</b>	Intelsat LLC	<b>Phone Number:</b>	202-944-7848
<b>DBA Name:</b>		<b>Fax Number:</b>	202-944-7860
<b>Street:</b>	c/o Intelsat Global Svc. Corp. 3400 International Drive, N.W.	<b>E-Mail:</b>	susan.crandall@intelsat.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20008 -3006
<b>Attention:</b>	Susan H. Crandall		

KS35      SAT-MOD-20050204-00025      IB2005000256  
 Intelsat LLC  
 MARISAT-F2

## ATTACHMENT

### MARISAT-F2

**SAT-MOD-20050204-00025**

**SAT-AMD-20050323-00071**

**SAT-STA-20041217-00224**

**SAT-STA-20050406-00080**

**Call Sign: KS35**

**April 27, 2005**

Intelsat LLC's ("Intelsat") requests, File No. SAT-MOD-20050204-00025, as amended by SAT-AMD-20050323-00071, for authority<sup>1</sup> and SAT-STA-20050406-00080 for extension of temporary authority to provide UHF capacity on a non-interference basis via its MARISAT-F2 satellite at 33.9° W.L. orbital location (Call Sign KS35) ARE GRANTED. Accordingly, Intelsat is authorized to operate the MARISAT satellite in the UHF Narrowband Channel A (307.750 MHz Center Frequency (uplink) and 254.150 MHz Center Frequency (downlink)) and the UHF Narrowband Channel B (311.150 MHz Center Frequency (uplink) and 257.550 MHz Center Frequency (downlink)) ("UHF bands") on a non-interference basis until May 30, 2006<sup>2</sup>, in accordance with the terms, conditions, and technical specifications set forth in its application, this Attachment and the Federal Communications Commission's Rules.

- (1) Intelsat shall ensure that coordination of its UHF band operations at the 33.9° W.L. orbital location with existing satellites has been completed such that no unacceptable interference results from the operation of MARISAT at the 33.9° W.L. orbital location in the UHF bands.
- (2) While operating at the 33.9° W.L. orbital location in the UHF bands, no harmful interference shall be caused by the MARISAT satellite to any other lawfully operating satellites or radiocommunication systems. Operations of the MARISAT satellite in the UHF bands shall cease immediately upon notification of such interference and Intelsat shall inform the Commission in writing immediately of such an event.
- (3) While operating the MARISAT satellite in the UHF bands at the 33.9° W.L. orbital location, Intelsat is required to accept interference from other lawfully operating in-orbit satellites or other radiocommunication systems.

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<sup>1</sup> The Commission has previously authorized Intelsat to operate the MARISAT-F2 satellite at 33.9° W.L. orbital location and to provide C- and L-band service to the National Science Foundation. See Authorizations Granted, Applications of Comsat General Corporation, Lockheed Martin Global Telecommunications LLC, Comsat New Services, Inc., Intelsat LLC, and Intelsat MTC LLC to Assign Licenses and Authorizations and Request for a Declaratory Ruling on Foreign Ownership, DA 04-3418 (Oct. 27, 2004) (Public Notice).

<sup>2</sup> The authority for the Marisat-F2 satellite's operation at 33.9°W.L. was provided by order DA 00-1828 (August 14, 2000). The authority granted in that order expires August 13, 2015.

- (4) Any action taken or expense incurred as a result of operations pursuant to this authority is solely at Intelsat's risk.
- (5) This grant does not convey to Intelsat any authority to operate another satellite at the 33.9° W.L. orbital location in the UHF bands or any priority in the U.S. application-processing queue relative to applications for authority to operate a regularly authorized satellite at this orbital position in the UHF bands.
- (6) Intelsat is required to inform its customers utilizing the UHF bands in writing, including end-users receiving service from resellers accessing capacity on MARISAT, that UHF service is being provided until May 30, 2006 pursuant to a grant on a non-harmful interference basis as specified above.
- (7) Intelsat's request to waive the table of allocations to the extent necessary to operate on a non-interference basis in the UHF bands is granted.
- (8) This grant shall be limited to the purpose described in Intelsat's application, *i.e.*, support of NATO operations.
- (9) This grant is conditioned upon the concurrence of National Telecommunications and Information Administration (NTIA) in the use of UHF bands. If NTIA withdraws its concurrence, the grant will be cancelled effective upon the date NTIA withdraws its concurrence.
- (10) Intelsat must operate pursuant to the requirements set forth in the April 14, 2005 letter from Frederick R. Wentland, Associate Administrator, Office of Spectrum Management, NTIA to Donald Abelson, Chief, International Bureau, Federal Communications Commission.
- (11) With this grant, Intelsat's request for Special Temporary Authority SAT-STA-20041217-00224 is DISMISSED as MOOT.
- (12) This grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Telecommunications and**  
**Information Administration**  
Washington, D.C. 20230

APR 14 2005

Mr. Donald Abelson  
Chief of the International Bureau  
Federal Communications Commission  
445 12th Street SW  
Washington, D.C. 20554

Dear Mr. Abelson:

In their application of February 4, 2005, INTELSAT, as Manager for the MARISAT system, has requested that the Federal Communications Commission ("Commission") modify their authorization to allow them to provide UHF communications from their MARISAT space station located at 33.9W.<sup>1</sup> The specific frequencies being requested are four 25-kHz channels centered on 307.750 MHz (Earth-to-space), 311.150 MHz (Earth-to-space), 254.150 MHz (space-to-Earth), and 257.550 MHz (space-to-Earth). This request is in support of NATO through Paradigm Secure Communications. On April 8, 2005 the Commission informed National Telecommunications and Information Administration (NTIA) that this conditional license will expire on May 30, 2006. INTELSAT has stated that these operations will be conducted on a non-interfering basis.

Currently, these MARISAT UHF operations are being conducted under a Special Temporary Authority (STA) which is to expire on April 10, 2005.<sup>2</sup> NTIA concurred to this STA after consultations with the Department of Defense (DoD).<sup>3 4</sup> DoD has stated that they could support this INTELSAT request contingent on operating conditions that have been agreed with the INTELSAT customer for the STA. Concerning these conditions, DoD has clarified to NTIA that the condition of NATO operating user terminals East of 20W when transmitting to the MARISAT satellite is limited to the frequency 307.75 MHz.

With the understanding that the conditional license will be granted under the same terms of the existing STA, NTIA has no objection to the FCC authorizing the UHF operations sought by INTELSAT. However, NTIA retains the right to withdraw frequency authorization for this authorization, e.g., if the MARISAT capacity would be needed to meet US defense requirements.

<sup>1</sup> Space Station Application from Patrick J. Cerra, Vice President, INTELSAT LLC, to Federal Communications Commission dated February 4, 2005.

<sup>2</sup> See Commission File SAT-STA-20041217-00225 dated February 11, 2005.

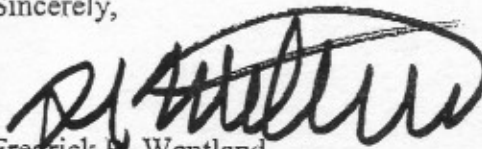
<sup>3</sup> Letter from Frederick R. Wentland, Associate Administrator, Office Spectrum Management to Donald Abelson, Chief of the International Bureau dated January 24, 2005.

<sup>4</sup> Letter from Badri A. Younes, Director, Spectrum Management, Networks and Information Integration, Office of the Assistant Secretary of Defense to Frederick R. Wentland, Associate Administrator, Office Spectrum Management dated January 19, 2005.

NTIA's consideration of this authorization is limited to the existing customer. Any other proposed use of the MARISAT UHF capacity will require further coordination.

If you have any questions, please contact Edward Davison (202-482-5526; [edavison@ntia.doc.gov](mailto:edavison@ntia.doc.gov)).

Sincerely,

A handwritten signature in black ink, appearing to read "F. Wentland", written over a horizontal line.

Fredrick R. Wentland  
Associate Administrator  
Office of Spectrum Management

9-16. Name of Contact Representative (If other than applicant)

<b>Name:</b>	Carl R. Frank	<b>Phone Number:</b>	202-719-7269
<b>Company:</b>	Wiley Rein & Fielding LLP	<b>Fax Number:</b>	202-719-7409
<b>Street:</b>	1776 K Street, NW	<b>E-Mail:</b>	cfrank@wrf.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20006-
<b>Contact Title:</b>	Attorney	<b>Relationship:</b>	Legal Counsel

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- (N/A) b3. Amendment to a Pending Application
- (N/A) b4. Modification of License or Registration
- b5. Assignment of License or Registration
- b6. Transfer of Control of License or Registration
- (N/A) b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- (N/A) b10. Other (Please specify)

17c. Is a fee submitted with this application?

- If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).
- Governmental Entity     Noncommercial educational licensee
- Other (please explain):

17d.

Fee Classification BFY – Space Station Modification (Geostationary)

18. If this filing is in reference to an existing station, enter:

(a) Call sign of station:  
KS-35

19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:

(a) Date pending application was filed:

(b) File number:

SATMOD1999121400121

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier     Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
- Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network     Not connected to a Public Switched Network     N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz)     b. Ku-Band (12/14 GHz)
- c. Other (Please specify upper and lower frequencies in MHz.)  
Frequency Lower:    Frequency Upper: (Please specify additional frequencies in an attachment)



TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
- b. Temporary-Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Geostationary Space Station
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive    Transmit-Only    Receive-Only    N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a — authorization to add new emission designator and related service
- b — authorization to change emission designator and related service
- c — authorization to increase EIRP and EIRP density
- d — authorization to replace antenna
- e — authorization to add antenna
- f — authorization to relocate fixed station
- g — authorization to change frequency(ies)
- h — authorization to add frequency
- i — authorization to add Points of Communication (satellites & countries)
- j — authorization to change Points of Communication (satellites & countries)
- k — authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l — authorization to change orbit location
- m — authorization to perform fleet management
- n — authorization to extend milestones
- o — Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.  Yes  No

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government?  Yes  No  N/A

30. Is the applicant an alien or the representative of an alien?  Yes  No  N/A

31. Is the applicant a corporation organized under the laws of any foreign government?  Yes  No  N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?  Yes  No  N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes  No  N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

Exhibit D

#### BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?  
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

Yes  No

Exhibit C

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.

Yes  No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.

Yes  No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances

Yes  No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.

Yes  No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer. Exhibit E

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.

Yes  No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.

Yes  No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Intelsat LLC seeks authority to provide UHF Space Segment capacity on a non-interference basis via its MARISAT-F2 satellite at 33.9 degrees W.L. See attached. Intelsat LLC certifies that any remaining information has not changed.

Exhibit A

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing

Patrick J. Cerra

46. Title of Person Signing

Vice President

—>

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT  
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION  
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

**FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to [jboley@fcc.gov](mailto:jboley@fcc.gov). PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**



Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of:

INTELSAT LLC

Application to Modify Authorization to  
Operate the MARISAT-F2 Satellite at  
33.9° W.L.

File Nos. SAT-ASG-20040528-00109;  
SAT-T/C-20040903-00167;  
SAT-MOD-19991214-00121

**APPLICATION OF INTELSAT LLC  
TO MODIFY AUTHORIZATION**

Intelsat LLC ("Intelsat") hereby requests that the Federal Communications Commission ("Commission" or "FCC") modify its authorization for the satellite listed below:

1. **MARISAT-F2** (call sign KS-35 or MARISAT): File Nos. SAT-ASG-20040528-00109; SAT-T/C-20040903-00167; SAT-MOD-19991214-00121. Intelsat requests modification of its license to enable it to provide UHF Space Segment capacity on a non-interference basis at 33.9° W.L.

The Commission has authorized Intelsat to operate the MARISAT-F2 satellite at 33.9° W.L. and to provide C- and L-band service to the National Science Foundation ("NSF").<sup>1</sup> Intelsat now has received a request from Paradigm Secure Communications for Mobile Satellite Service ("MSS") on the satellite in two UHF Narrowband channels in support of the North Atlantic Treaty Organization ("NATO"). Granting Intelsat authority to provide UHF service on a non-interference basis via the MARISAT-F2 satellite at 33.9° W.L. will serve the public

<sup>1</sup> See Authorizations Granted, Applications of Comsat General Corporation, Lockheed Martin Global Telecommunications LLC, Comsat New Services, Inc., Intelsat LLC, and Intelsat MTC LLC to Assign Licenses and Authorizations and Request for a Declaratory Ruling on Foreign Ownership, DA 04-3418 (Oct. 27, 2004) (Public Notice); *Intelsat, Ltd. and Zeus Holdings Limited, Consolidated Application for Consent to Transfer of Control of Holders of Title II and Title III Authorizations and Petition for Declaratory Ruling Under Section 310 of the Communications Act of 1934, As Amended*, DA 04-4034 (Int'l Bur. rel. Dec. 22, 2004) (Order and Authorization).

interest by enabling Intelsat to meet the communications requirements of NATO and thereby aid the U.S. Government's efforts to ensure the safety of its citizens.

The requested modification will not adversely affect any party, and the number of orbital locations assigned to Intelsat will not increase. Moreover, the National Telecommunications and Information Administration ("NTIA") and the Joint Spectrum Center have coordinated these frequencies within the Department of Defense ("DoD") and with NATO and the United Kingdom's Ministry of Defence ("UK-MoD") to minimize the risk of harmful interference to other UHF spectrum users. In the event of unforeseen excess interference to adjacent networks, Intelsat will take immediate action to eliminate the source of such interference. Intelsat, therefore, respectfully requests that the Commission expeditiously grant the requested modification.

In accordance with the requirements of Sections 25.114 and 25.117(d) of the Commission's Rules, 47 C.F.R. §§ 25.114, 25.117(d), Form 312 and Schedule S are attached to this application. Intelsat further certifies that any information not provided in this application, Schedule S, Form 312, or the accompanying exhibits has not changed.

#### **I. BACKGROUND**

MARISAT-F2 is one of the three MARISAT satellites that were launched in 1976 to provide UHF service to the U.S. Navy and C- and L-band service to commercial maritime customers.<sup>2</sup> MARISAT-F2, which frequently is referred to as "Gapfiller" in DoD

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<sup>2</sup> *COMSAT General Corporation, et al., Applications for Authority to Participate in the Construction and Operation of a Communications Satellite System to Provide Communications Service to the Department of the Navy and to Commercial Maritime Users*, 58 FCC 2d 386 (Tel. Cmte. 1976) (Order and Authorization) (granting construction permits for the MARISAT system).

documentation, originally operated in the Indian Ocean Region.<sup>3</sup> On August 16, 2000, however, the Commission granted a request by COMSAT General Corporation (“COMSAT General”), the former license holder, to modify its authorization to relocate the satellite to 33.9° W.L. to provide C- and L-band services to the NSF.<sup>4</sup> At that time, COMSAT General did not pursue authority to provide UHF service from that location.<sup>5</sup> Nonetheless, the UHF narrowband channels for which Intelsat presently seeks authority were last coordinated and authorized by the Commission to operate from 33.9° W.L. on a temporary non-interference basis in 2003.<sup>6</sup>

On October 27, 2004, the Commission granted the assignment of the space station authorization for the MARISAT-F2 satellite from COMSAT General to Intelsat.<sup>7</sup> Intelsat

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<sup>3</sup> *COMSAT General Corporation, et al., Applications for Authority to Participate in the Construction and Operation of a Communications Satellite System to Provide Communications Service to the Department of the Navy and to Commercial Maritime Users*, 62 FCC 2d 856 (Tel. Cmte. 1976) (Order and Authorization) (authorizing the launch of and operations of MARISAT-F2 at 73° E.L.).

<sup>4</sup> *COMSAT General Corporation, For Modification of Authorization to Operate Space Station in the Mobile Satellite Service*, 15 FCC Rcd 18776 (Int’l Bur. 2000) (Order and Authorization).

<sup>5</sup> COMSAT General initially sought authority to provide UHF service from 33.9° W.L. in support of NATO. *See* COMSAT General Corporation, Request for Special Temporary Authority to Relocate the Marisat-F2, File No. SAT-STA-19991214-00122 (filed Dec. 14, 1999); COMSAT General Corporation, Application for Modification of Marisat Space Station, File No. SAT-MOD-19991214-00121 (filed Dec. 14, 1999). However, COMSAT General later determined that no such authority would be needed and therefore removed the request from its application. *See* COMSAT General Corporation, Amendment to Application for Authority to Relocate the Marisat-F2, File No. SAT-AMD-20000119-00048 (filed Jan. 19, 2000).

<sup>6</sup> *See* COMSAT General Request for 180-day Special Temporary Authority (STA) for MARISAT F-2 UHF Transponder (granted by stamp-grant Jan. 17, 2003 for 30 days and subsequently renewed); COMSAT General Request for 30-day Special Temporary Authority (STA) for MARISAT F-2 “Narrowband B” UHF Transponder (granted by stamp-grant Jan. 31, 2003 and subsequently renewed).

<sup>7</sup> *See* n.1, *supra*. On December 22, 2004, the Commission approved the transfer of control of Intelsat LLC, among other entities, to Zeus Holdings Limited. *See id.*

currently uses the MARISAT-F2 satellite to provide C- and L-band service to the NSF from the 33.9° W.L. orbital location.

## II. TECHNICAL INFORMATION FOR THE PROPOSED MODIFICATION

By this application, Intelsat requests modification of its authorization for the MARISAT-F2 satellite to enable it to provide UHF Space Segment capacity on a non-interference basis at 33.9° W.L.

### A. Frequencies Requested

Intelsat seeks to provide service in two UHF Narrowband channels with the following characteristics:

#### Narrowband Channel A:

Up-link: 307.75 MHz Center Frequency  
Down-link: 254.15 MHz Center Frequency  
Band-width: 24 kHz  
EIRP: 23 dBW  
EIRP pattern varies less than 1 dB over the earth's surface.  
G/T: -18 db/K  
SFD: -151 dBW/m<sup>2</sup>  
Pole: RHCP  
Beam: Global

#### Narrowband Channel B:

Up-link: 311.15 MHz Center Frequency  
Down-link: 257.55 MHz Center Frequency  
Band-width: 24 kHz  
EIRP: 23 dBW  
EIRP pattern varies less than 1 dB over the earth's surface  
G/T: -18 db/K  
SFD: -151 dBW/m<sup>2</sup>  
Pole: RHCP  
Beam: Global

These UHF channel frequencies are assigned for Military Satellite Communications ("SATCOM") and are reserved for military use. Intelsat anticipates that ITU registration of the

UHF frequencies will remain under the purview of NTIA, consistent with past operation of these channels.

**B. Service Description**

The UHF Narrowband channels will complement NATO UHF communications capacity by providing two additional 24 kHz channels to existing NATO communications infrastructure. These channels provide NATO military forces mobile communications, typically between ships at sea. The planned coverage area is the Atlantic Ocean Region. The specific emissions and terminals will be decided by NATO after testing the channels in the NATO operating environment.

**C. Interference Analysis and Coordination**

In conducting the interference analysis, Intelsat reviewed the Mil-Std-188-181A UHF channel definition tables. Narrowband channel B is clear with other UHF channels. However, Narrowband channel A has an overlapping uplink with another UHF channel assignment requiring coordination. The other satellites in this band are SKYNET, UFO, LEASAT, AFSATCOM and FLTSATCOM, which are operated by UK-MoD and the U.S. Government.

To minimize the risk of harmful interference to other UHF spectrum users, NATO and UK-MoD have coordinated with NTIA and the Joint Spectrum Center, which represent the U.S. Government on spectrum issues, regarding the use of both Narrowband channels by NATO. NTIA has submitted a letter to the FCC approving the use of these frequencies. Intelsat and NATO will abide by the operational constraints required by the coordination agreement as outlined by NTIA. Moreover, MARISAT-F2 will be operated on a non-interference basis. If any future interference issues arise Intelsat can terminate UHF operations as quickly as directed to by NTIA or the FCC.

### III. PUBLIC INTEREST SHOWING

The proposed modification is fully consistent with Commission precedent and will serve the public interest.

The Commission traditionally has provided licensees with the flexibility to adjust to changed circumstances. The Commission has stated that licensees are “in a better position” to determine how to tailor their systems “to meet the particular needs of [their] customers.”<sup>8</sup> As a result, “the Commission will generally grant a licensee’s request to modify its system, provided there are no compelling countervailing public interest considerations.”<sup>9</sup> Moreover, the Commission has determined that modifying a space station authorization to enable the use of additional frequencies to assist the U.S. Government “with ensuring the safety of life and property ... promotes the public interest.”<sup>10</sup>

The instant modification application is entirely consistent with these policies. Intelsat proposes to use the additional UHF frequencies in support of NATO. This, in turn, promotes the interest of the U.S. Government in ensuring the safety of its citizens.

### IV. WAIVER REQUESTS

Under Section 1.3 of the Commission’s rules, the Commission has authority to waive its rules “for good cause shown.”<sup>11</sup> Good cause exists if “special circumstances warrant a deviation

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<sup>8</sup> See, e.g., *AMSC Subsidiary Corporation*, 13 FCC Rcd 12316, 12318 (1998) (Order and Authorization).

<sup>9</sup> *Id.*; see also 25.117(d)(ii).

<sup>10</sup> *Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP for a Mobile Satellite System in the 1.6 GHz Frequency Band*, 18 FCC Rcd 11480, ¶ 7 (Int’l Bur. 2003) (Order).

<sup>11</sup> 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

from the general rule and such deviation will serve the public interest” better than adherence to the general rule.<sup>12</sup> The waivers requested below meet this test.

**A. Request for Waiver of Section 2.106**

Because the UHF band is not allocated for commercial service in the United States, Intelsat requests a waiver, should the Commission deem it necessary, of Section 2.106 of the Commission’s rules, 47 C.F.R. § 2.106 (Table of Frequency Allocations). In this case, there is good cause to waive Section 2.106 because the public interest benefits created by enabling Intelsat to provide the requested services in support of NATO are significant and there is little risk of interference.<sup>13</sup>

**B. Request for Partial Waivers of Schedule S**

There is good cause to grant a partial waiver of Schedule S to the extent that Intelsat currently cannot provide some of the requested information. Specifically, Intelsat has not provided modulation and emission data because such information cannot be determined until NATO has tested the channels in the NATO operating environment. As the Commission is aware, Intelsat is seeking special temporary authority (“STA”) to test these channels. Therefore, Intelsat will provide this information upon completion of NATO testing, which will be within thirty days of the grant of STA.

Likewise, there is good cause to waive those portions of Schedule S for which it is technically infeasible for Intelsat to provide the required information. In particular, due to the wide UHF beam-width, the required 2 dB antenna beam contour would be well off of the Earth. Intelsat instead provides a contour at 0.8 dB, in .gxt format, in response to Section S8f.

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<sup>12</sup> *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

<sup>13</sup> Moreover, as noted above, NTIA has submitted a letter to the FCC approving the use of these frequencies.

Moreover, Intelsat could not answer Sections S7q and S7r because there is no receive attenuation adjustment. Therefore, there is good cause to grant the requested waivers.

**V. CONCLUSION**

Based on the foregoing, Intelsat respectfully requests modification of its authorization for the MARISAT-F2 satellite to permit the provision of services as described herein.

Respectfully submitted,

**Intelsat LLC**

By: /s/ Patrick J. Cerra

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February 4, 2005



## **Exhibit C**

### **Response to Question 35: Waivers**

Intelsat requests a waiver, to the extent that the Commission deems it necessary, of Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106 (Table of Frequency Allocations). Intelsat also requests partial waivers of Schedule S. The background and justifications for the requested waivers are set forth in Section IV of the application.

## Exhibit B

### Response to Question 24: Frequency Band(s)

Intelsat currently is authorized to operate the MARISAT-F2 satellite in the C- and L-bands from the 33.9° W.L. orbital location. By this modification, Intelsat seeks to add the following two Narrowband UHF channels:

#### Narrowband Channel A:

Up-link: 307.738 MHz to 307.762 MHz  
Down-link: 254.138 MHz to 254.162 MHz

#### Narrowband Channel B:

Up-link: 311.138 MHz to 311.162 MHz  
Down-link: 257.538 MHz to 257.562 MHz

FEDERAL COMMUNICATIONS COMMISSION  
SATELLITE SPACE STATION AUTHORIZATIONS  
(Technical and Operational Description)

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: MARISAT-F2		e. Estimated Date of Placement into Service: 1/1/1977		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 5 Years		j. Number of transponders offered on a common carrier basis:	
c. Construction Completion Date:		g. Total Number of Transponders: 2		k. Total Common Carrier Transponder Bandwidth: MHz	
d1. Est Launch Date Begin: 10/14/1976	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 0.048 MHz		i. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO	

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper  
Also indicate the nature of service(s) for each frequency band.

Frequency Band Limits				e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (. Hz)		Upper Frequency (. Hz)			
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
254.138	M	254.162	M	T	Mobile-Satellite Service
257.538	M	257.562	M	T	Mobile-Satellite Service
307.738	M	307.762	M	R	Mobile-Satellite Service
311.138	M	311.162	M	R	Mobile-Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 33.9 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: MARISAT-F2 is currently authorized to operate at 33.9 W in the C & L Bands.	
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance: 10 Degrees	Range of orbital are in which adequate service can be provided (Optional): Degrees EW		
d. Toward West:	0.1 Degrees		g. Westernmost:		
e. Toward East:	0.1 Degrees		h. Easternmost:		
i. Reason for service are selection (Optional):					

**FEDERAL COMMUNICATIONS COMMISSION  
SATELLITE SPACE STATION AUTHORIZATIONS  
FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 2: NGSO Orbits

**S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY**

S4a. Total Number of Satellites in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4b. Total Number of Orbital Planes in Network or System:

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other

**S5. INITIAL SATELLITE PHASE ANGLE** For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)

**NO NGSO DATA FILED**

**FEDERAL COMMUNICATIONS COMMISSION**  
**SATELLITE SPACE STATION AUTHORIZATIONS**  
**FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 3: Service Areas

S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(c) Service Area Diagram File Name (GXT File)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram.
AOR-T	S	ServArea.gxt	Atlantic Ocean Region
AOR-R	S	ServArea.gxt	Atlantic Ocean Region

**FEDERAL COMMUNICATIONS COMMISSION**  
**SATELLITE SPACE STATION AUTHORIZATIONS**  
**FCC Form 312 - Schedule S: (Technical and Operational Description)**

S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross- Polar Iso- lation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive					
										(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (k)	(o) G/T Max. Gain Pt. (db/K)	(p) Min. Saturation Flux Density (dBW/m2)	Input Attenuator (dB)		
		(q) Max. Value	(r) Step Size															
AOR-T	T	14	13	0.65	0.65	11	N		AOR-T	1.5	18	23						
AOR-R	R	15.4	14.4	0.65	0.65	11	N		AOR-R				31	-18	-151			

**FEDERAL COMMUNICATIONS COMMISSION  
SATELLITE SPACE STATION AUTHORIZATIONS  
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:  
Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a) Beam ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or "X")	(d) GSO Ref. Orbital Longitude (Deg. E/W)	(e) NGS0 Antenna Gain Contour Description (Figure/Table/ Exhibit)	(f) GSO Antenna Gain Contour Data (GXT File)	Max. Power Flux Density (dBW/M2/Hz)				
						At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
AOR-T	C		-33.9	MARISAT.pdf	UHF.gxt	-148	-148	-148	-148	-148
AOR-R	C		-33.9	MARISAT.pdf	UHF.gxt					

**FEDERAL COMMUNICATIONS COMMISSION**  
**SATELLITE SPACE STATION AUTHORIZATIONS**  
**FCC Form 312 - Schedule S: (Technical and Operational Description)**

S9. SPACE STATION CHANNELS For each frequency channel provide:

(a) Channel No.	(B) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
A-T	24	T	307.75	R	C
B-T	24	T	311.15	R	C
A-R	24	R	254.15	R	C
B-R	24	R	257.55	R	C

S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
A	170	A-R	AOR-R	A-T	AOR-T
B	170	B-R	AOR-R	B-T	AOR-T



**FEDERAL COMMUNICATIONS COMMISSION**  
**SATELLITE SPACE STATION AUTHORIZATIONS**  
**FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 7: Digital Modulation

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) No. of Phases	(e) Uncoded Data Rate (kbps)	(f) FEC Error Correction Coding Rate	(g) CDMA Processing Gain (dB)	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
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FEDERAL COMMUNICATIONS COMMISSION  
SATELLITE SPACE STATION AUTHORIZATIONS  
FCC Form 312 - Schedule S: (Technical and Operational Description)

Page 10: TT and C

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): Yes

Remote Control (TT C) Location(s):

S14a. Street Address: 22000			
S14b. City: Clarksburg	S14c. County: Montgomery	S14d. State/Country: MD	S14e. Zip Code: 20871
S14f. Telephone Number: 301-428-1501		S14g. Call Sign of Control Station (if appropriate): E000355	

**FEDERAL COMMUNICATIONS COMMISSION  
SATELLITE SPACE STATION AUTHORIZATIONS  
FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 11:  
Characteristics and  
Certifications

**S15. SPACECRAFT PHYSICAL CHARACTERISTICS:**

S15a. Mass of spacecraft without fuel (kg): 306.356	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 655.441		
S15c. Mass of spacecraft and fuel at launch (kg): 392.942	S15f. Length (m): 2.159	S15i. Payload: 1
S15d. Mass of fuel, in orbit, at beginning of life (kg): 328.841	S15g. Width (m): 2.159	S15j. Bus: 1
S15e. Deployed Area of Solar Array (square meters): 8.2	S15h. Height (m): 3.81	S15k. Total: 1

**S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:**

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts):	(a):	(f):	(k):	(p):
Bus (Watts):	(b):	(g):	(l):	(q):
Total (Watts):	(c):	(h):	(m):	(r): 202
Solar Array (Watts):	(d): 409	(i): 380	(n): 348	(s): 312
Depth of Battery Discharge (%):	(e) %	(j) %	(o) %	(t) 10 %

**S17. CERTIFICATIONS:**

a. Are the power flux density limits of § 25.208 met?	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	N/A
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met?	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>	N/A

**In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.**

## Exhibit D

### Response to Question 34: Foreign Ownership

The Commission previously approved the foreign ownership in Zeus Holdings Limited (“Zeus”), the entity that controls Intelsat. *See Intelsat, Ltd. and Zeus Holdings Limited, Consolidated Application for Consent to Transfer of Control of Holders of Title II and Title III Authorizations and Petition for Declaratory Ruling Under Section 310 of the Communications Act of 1934, As Amended, Order and Authorization, DA 04-4034 (Int’l Bur. rel. Dec. 22, 2004) (“Intelsat-Zeus Order”)*. There have been no material changes to the foreign ownership of Zeus since the date of the *Intelsat-Zeus Order*.

Exhibit E

Following are the officers of Intelsat LLC:

Ramu Potarazu, President  
Patrick J. Cerra, Vice President  
David Meltzer, Secretary  
Elizabeth Scheid, Treasurer

The address of all Intelsat LLC officers is:

North Tower, 2<sup>nd</sup> Floor  
90 Pitts Bay Road  
Pembroke, HM 08  
Bermuda

Intelsat LLC is wholly owned by Intelsat Holdings LLC, which is wholly owned by Intelsat (Bermuda), Ltd., which is wholly owned by Intelsat, Ltd. Intelsat, Ltd., in turn, is wholly owned by Zeus Holdings Limited.

Following are the officers and directors of Zeus Holdings Limited:

**Officers**

James N. Perry, Jr., President  
Richard A. Haight, Vice President  
Andrew D. Africk, Vice President  
Andrew P. Sillitoe, Secretary  
Helen Ann Chisholm, Assistant Secretary  
Appleby Corporate Services, Assistant Secretary  
Jonathan L. Evans, Resident Representative  
Appleby Corporate Services, Assistant Resident Representative

**Directors**

James N. Perry, Jr.  
Richard A. Haight  
Andrew D. Africk  
Andrew P. Sillitoe

Shareholders holding 10% or more of the issued share capital of Zeus Holdings Limited are as follows:

Shareholder	Jurisdiction of Incorporation	Address	% of voting and equity stock
AIF V Euro Holdings, L.P.	Cayman Islands	c/o Walkers SPV Limited Walker House PO Box 908GT George Town, Grand Cayman Cayman Islands	24.8%
Apax WW Nominees Ltd. <sup>1</sup>	United Kingdom	15 Portland Place London W1B 1PT	19.8%
MDCP IV Global Investments, L.P.	Cayman Islands	c/o Walkers SPV Limited Walker House PO Box 908QT George Town, Grand Cayman Cayman Islands	24.8%
Permira Europe III L.P. 2	Guernsey	PO Box 255 Trafalgar Court Les Banques St. Peter Port, Guernsey CI, GY1 3QL	17.8%

<sup>1</sup> Registered shareholder for nine entities holding, in the aggregate, 19.8% of the equity of Zeus Holdings Limited.